This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

1. (Previously Amended) A planar-magnetic transducer comprising:

at least one thin film vibratable diaphragm with a first surface side and a second surface side, including a predetermined active region, said predetermined active region including a predetermined conductive surface area for converting an input electrical signal into a corresponding acoustic output;

primary magnetic structure including at least three elongated magnets placed adjacent and substantially parallel to each other, said magnetic structure configured to cooperate with the conductive surface area conducting an electrical signal to actuate the active region to produce an acoustic output;

a mounting support structure coupled to the primary magnetic structure and the diaphragm to capture the diaphragm, hold it in a predetermined state of tension and space it at predetermined distancing the primary magnetic structure adjacent one of the surface sides of the diaphragm;

said conductive surface area including elongate conductive paths running substantially in parallel with said magnets;

the mounting support structure, the at least three magnets of the primary magnetic structure, and the diaphragm having coordinated compositions and being cooperatively configured and positioned in predetermined spaced apart relationships wherein (i) the mounting support structure stabilizes the diaphragm in a static configuration at the predetermined tension which remains stable over and between extended periods of use, despite occurrence of dynamic conditions in response to extreme high energy forces driving the diaphragm to audio output, and (ii) the high energy magnetic forces interacting between the at least three magnets do not interfere with the predetermined tension of the diaphragm;

at least one secondary magnet structure positioned adjacent to the opposite surface of said thin film diaphragm from the primary magnet structure and spaced a predetermined distance from said diaphragm;

said secondary magnet structure being directly adjacent less diaphragm surface area than said primary magnet structure, said transducer being configured so that the secondary support structure has a more open architecture and significantly more open space than the primary support structure,

allowing passage of acoustic energy with significantly less interference from the secondary support structure than the primary support structure and wherein a plurality of elongated magnets of the primary magnetic structure are without corresponding magnets of opposing position in the secondary magnetic structure, the transducer thereby configured to have an essentially single-ended configuration over a portion of the diaphragm;

said planar-magnetic transducer being operable as an enhanced single ended transducer.

2. (Original) The planar-magnetic transducer of 1 wherein said secondary magnetic structure is less than 60 percent of the magnets of the primary magnetic structure.

3. (Original) The planar-magnetic transducer of 1 wherein said secondary magnetic structure is less than 40 percent of the magnets of the primary magnetic structure.

4. (Original) The planar-magnetic transducer of 1 wherein said secondary magnetic structure is no more than 20 percent of the magnets of the primary magnetic structure.

5. (Previously Amended) The planar-magnetic transducer of 1 wherein said secondary magnetic structure has one row of magnets centered side to side on the planar-magnetic transducer.

6. (Original) The planar-magnetic transducer of 1 wherein said primary magnetic structure is the backside of the transducer and the secondary magnetic structure is the front of the transducer optimized to be oriented toward the listening position.

7. (Original) The planar-magnetic transducer of 1 wherein said primary magnet structure has five adjacent rows of magnets and said secondary magnet structure has three adjacent rows of magnets.

8. (Original) The planar-magnetic transducer of 1 wherein said primary magnet structure has five adjacent rows of magnets and said secondary magnet structure has one central row of magnets.

9. (Original) The planar-magnetic transducer of 1 wherein said secondary magnetic structure

comprises high energy neodymium magnets.

10. (Original) The planar-magnetic transducer of claim 6 wherein said secondary magnetic structure comprises high energy neodymium magnets.

11. (Currently Cancelled) A planar-magnetic transducer comprising:

at least one thin film vibratable diaphragm with a first surface side and a second surface side, including a predetermined active region, said predetermined active region including a predetermined conductive surface area for converting an input electrical signal into a corresponding acoustic output;

primary magnetic structure including at least three elongated magnets placed adjacent and substantially parallel to each other with at least one of said magnets being of high energy, with each having an energy product of greater than 25 mega Gauss Oersteds; and

a mounting support structure coupled to the primary magnetic structure and the diaphragm to capture the diaphragm, hold it in a predetermined state of tension and space it at predetermined distancing from the primary magnetic structure adjacent one surface side of the film diaphragm;

said conductive surface area including elongate conductive paths running substantially in parallel with said magnets;

any of the at least three adjacent magnets being oriented to be of opposite polarity orientation in relation to an adjacent magnet;

said primary magnetic structure having at least three adjacent rows of side by side magnets with at least an outer two rows of the at least three rows of magnets providing less magnetic field strength through the conductive surface area of the diaphragm than provided through the conductive surface areas of the diaphragm by a center row of the magnets;

said planar-magnetic transducer operating as a single-ended planar-magnetic transducer.

12. (Currently Cancelled) The planar-magnetic transducer of claim 11 including at least five adjacent rows of magnets with at least two outer rows of said five rows of magnets providing less magnetic field strength through the conductive surface area of the diaphragm than provided through the conductive surface area of the diaphragm by a center row of magnets.

13. (Currently Cancelled) The planar-magnetic transducer of claim 11 wherein the primary magnetic structure includes neodymium magnets with an energy rating of at least 34 mGO.

14. (Currently Cancelled) The planar-magnetic transducer of claim 11 wherein:

said diaphragm has a central region and remote regions that are a distance away from said central region,

said primary magnetic structure has central region magnets and adjacent remote magnets that are spaced away from said central region magnets,

the predetermined spaced apart relationship of the diaphragm from the magnets of the primary magnetic structure being greater at a central region of the diaphragm over at least one central magnet than at the remote regions over at least one remote magnet.

15. (Currently Cancelled) The planar-magnetic transducer of claim 11, further comprising:

at least one secondary magnet structure positioned adjacent to the opposite surface of said thin film diaphragm from the primary magnet structure and spaced a predetermined distance from said diaphragm;

said secondary magnet structure having fewer magnets than said primary magnet structure.

16. (Currently Cancelled) The planar-magnetic transducer of claim 15 wherein said secondary magnetic structure is less than 60 percent of the magnets of the primary magnetic structure.

17. (Currently Cancelled) The planar-magnetic transducer of claim 15 wherein said secondary magnetic structure is less than approximately 40 percent of the magnets of the primary magnetic structure.

18. (Currently Cancelled) The planar-magnetic transducer of claim 15 wherein said secondary magnetic structure is no more than 20 percent of the magnets of the primary magnetic structure.

19. (Currently Cancelled) The planar-magnetic transducer of claim 15 wherein said secondary magnetic structure one row of magnets centered in a side to side relationship on the planar-magnetic

transducer.

20. (Currently Cancelled) The planar-magnetic transducer of claim 11 wherein,

said diaphragm has a central region and remote regions that are a distance away from said central region,

said primary magnetic structure has central region magnets and adjacent remote magnets that are spaced away from said central region magnets,

said diaphragm and the predetermined spaced apart relationship from the magnets of the primary magnetic structure are spaced such that the spaced apart relationship is greater at a central region of the diaphragm over at least one central magnet than the remote diaphragm regions over at least one remote magnet.

21. (Currently Cancelled) A planar-magnetic transducer which includes:

a vibratable diaphragm and attached conducive area capable of interacting with a magnetic field to convert and audio signal to acoustic output from the diaphragm;

an arrangement of primary magnetic structure positioned proximate to one side of the diaphragm for providing a desired magnetic field;

at least one (but fewer that the all magnets comprising the primary magnetic structure) secondary magnet positioned on an opposing side of the diaphragm in a position which enhances acoustic output of the diaphragm;

and wherein the magnetic field strength is greater towards a central portion of an active area of the diaphragm between locations wherein the diaphragm is constrained from movement, and generally decreases moving away from a central portion outward toward edges of the active area in at least one dimension.

22. (Currently Cancelled) A transducer as in claim 21, further comprising at least one virtual magnetic structure positioned adjacent the secondary magnet and operable to further enhance the audio output of the transducer.

23. (Previously presented) A transducer as set forth in claim 1, wherein the magnets of the

secondary magnetic structure are concentrated over a part of the active area, and a part of the active area has no magnets adjacent in the secondary magnetic structure.

24. (Previously presented) A transducer as set forth in claim 23, wherein the magnets of the secondary magnetic structure are positioned in a central portion of the active area between two edges thereof.

25. (Previously presented) A transducer as set forth in claim 1, further comprising a virtual pole.

26. (Previously presented) A transducer as set forth in claim 1, wherein available magnetic energy is greater toward a central portion of the diaphragm and decreases toward edges thereof in at least one dimension.

27. (Previously presented) A transducer as set forth in claim 26 wherein differing magnet strength is derived from at least one of: a) volume of magnetic material; b) a difference in magnetic material; and c) use of virtual poles.

28. (Previously presented) A transducer as set forth in claim 1, wherein a distance between the diaphragm and the primary magnetic structure can be less with increased distance outward from a central portion of the active area.

29. (Previously presented) A transducer as set forth in claim 1, further comprising an additional diaphragm positioned so that the primary magnetic structure is intermediate two diaphragms.

30. (Previously presented) A transducer as set forth in claim1, wherein inter-magnet spaces are shaped to improve transducer response.

31. (Previously presented) A transducer as set forth in claim 1, wherein the support structure comprises virtual poles which are configured to be acoustically more transparent by means of perforations.

32. (Previously presented) A transducer as set forth in claim 1, wherein an axis of polarity of least one magnet of at least one of the primary and the secondary magnetic structures is oriented 90 degrees from that of another magnet in the transducer.

33. (Currently Cancelled) A transducer as set forth in claim 11, wherein the configuration of the magnetic structure and the conductive paths is such that the conductive paths are located adjacent areas of maximized flux density in the plane of the diaphragm, said areas being located off a center point between adjacent magnet rows and between the center point and a magnet row, the magnets being spaced far enough apart that there are two such maxima between each row of magnets.

34. (Currently Cancelled) A transducer as set forth in claim 11, further comprising at least one virtual pole.

35. (Currently Cancelled) A transducer as set forth in claim11, wherein the center row provides more magnetic field strength by one of : a)larger volume of magnetic material; and, b) magnetic material having a different energy product .

36. (Currently Cancelled) A transducer as set forth in claim11, further comprising a further diaphragm, positioned so that the primary magnetic structure is intermediate two diaphragms.

37. (Currently Cancelled) A transducer as set forth in claim 11, wherein structure defining inter-magnet spaces is configured so that the inter-magnet spaces have a flaring shape.

38. (Currently Cancelled) A transducer as set forth in claim 11, wherein at least one magnet row has a polarity orientation wherein the north-south magnetic axis is parallel to a plane of the diaphragm.

39. (Currently Cancelled) A transducer as set forth in claim 11, wherein the support structure further comprises a perforated area having a multiplicity of small closely spaced perforations providing more acoustic transparency in that area.

40. (Currently Cancelled) A transducer as set forth in claim 21, wherein over portions of the active area away from the diaphragm the primary magnetic structure and the diaphragm are essentially operable as a single ended device, whereas over a central portion of the active area the device is operable as a double ended device.

41. (Currently Cancelled) A transducer as set forth in claim 21, further comprising a primary support structure carrying said arrangement of primary magnetic structure, and a secondary support structure carrying the at least one secondary magnet, and wherein the secondary support structure has a substantially more open architecture than the primary support structure, and wherein the secondary support structure can be disposed toward a listener and the primary support structure can be disposed away from a listener.

42. (Currently Cancelled) A transducer as set forth in claim 21, further comprising at least one virtual pole.

43. (Currently Cancelled) A transducer as set forth in claim 21, wherein the magnetic field strength is greater toward a central portion due to use of one of a) a different volume of magnetic material, b) a different strength magnetic material, and c) a virtual pole.

44. (Currently Cancelled) A transducer as set forth in claim 21, wherein a distance between magnetic structure and the diaphragm is greater adjacent a central portion of the diaphragm than that away from the central portion of the diaphragm.

45. (Currently Cancelled) A transducer as set forth in claim 21, comprising at least two diaphragms.

46. (Currently Cancelled) A transducer as set forth in claim 21, wherein the transducer is configured so that a shape of an inter-magnet space is configured to improve response of the transducer.

47. (Currently Cancelled) A transducer as set forth in claim 21, wherein a magnet of the primary magnetic structure is disposed so that it has a polarity orientation that is 90 degrees different from that of at least one secondary magnet

48. (Newly presented) A planar-magnetic transducer comprising:

at least one thin film vibratable diaphragm with a first surface side and a second surface side, including a predetermined active region, said predetermined active region including a predetermined conductive surface area for converting an input electrical signal into a corresponding acoustic output;

primary magnetic structure including at least three elongated magnets placed adjacent and substantially parallel to each other with at least one of said magnets being of higher energy than at least two others, with each elongated magnet having an energy product of greater than 25 mega Gauss Oersteds; and

a mounting support structure coupled to the primary magnetic structure and the diaphragm to capture the diaphragm, hold it in a predetermined state of tension and space it at predetermined distancing from the primary magnetic structure adjacent one surface side of the film diaphragm;

said conductive surface area including elongate conductive paths running substantially in parallel with said magnets;

any of the at least three adjacent magnets being oriented to be of opposite polarity orientation in relation to an adjacent magnet;

said primary magnetic structure having at least three adjacent rows of side by side magnets with at least an outer two rows of the at least three rows of magnets providing less magnetic field strength through the conductive surface area of the diaphragm than provided through the conductive surface areas of the diaphragm by a center row of the magnets;

a secondary magnetic structure including at least one magnet row positioned adjacent to the opposite surface of said thin film vibratable diaphragm from the primary magnet structure and spaced a predetermined distance from said diaphragm, said secondary magnet structure being directly adjacent less diaphragm surface area than said primary magnet structure, said transducer being configured so that the secondary support structure has a more open architecture and significantly more open space than the primary support structure, allowing passage of acoustic energy with significantly less interference from the secondary support structure than the primary

support structure and wherein a plurality of elongated magnets of the primary magnetic structure are without corresponding magnets of opposing position in the secondary magnetic structure, the transducer thereby configured to have an essentially single-ended configuration over a portion of the diaphragm;

said planar-magnetic transducer being operable as an enhanced single ended transducer.

49. (Newly presented) The planar-magnetic transducer of claim 48, including at least five adjacent rows of magnets with at least two outer rows of said five rows of magnets providing less magnetic field strength through the conductive surface area of the diaphragm than provided through the conductive surface area of the diaphragm by a center row of magnets.

50. (Newly presented) The planar-magnetic transducer of claim 48, wherein the primary magnetic structure includes neodymium magnets with an energy rating of at least 34 mGO.

51. (Newly presented) The planar-magnetic transducer of claim 48, wherein:

said diaphragm has a central region and remote regions that are a distance away from said central region,

said primary magnetic structure has central region magnets and adjacent remote magnets that are spaced away from said central region magnets,

the predetermined spaced apart relationship of the diaphragm from the magnets of the primary magnetic structure being greater at a central region of the diaphragm over at least one central magnet than at the remote regions over at least one remote magnet.

52. (Newly presented) The planar-magnetic transducer of claim 48, wherein said secondary magnetic structure has an energy that is less than 60 percent of that of the magnets of the primary magnetic structure.

53. (Newly presented) The planar-magnetic transducer of claim 48, wherein said secondary magnetic structure has an energy that is less than that of 40 percent of the magnets of the primary magnetic structure.

54. (Newly presented) The planar-magnetic transducer of claim 48 wherein said secondary magnetic structure has an energy that is no more than 20 percent of that of the magnets of the primary magnetic structure.

55. (Newly presented) The planar-magnetic transducer of claim 48, wherein said secondary magnetic structure comprises one row of magnets centered in a side to side relationship on the active area of the vibratable diaphragm of said planar-magnetic transducer.

56. (Newly presented) The planar-magnetic transducer of claim 48, wherein,

said diaphragm has a central region and remote regions that are a distance away from said central region,

said primary magnetic structure has central region magnets and adjacent remote magnets that are spaced away from said central region magnets,

said diaphragm and the predetermined spaced apart relationship from the magnets of the primary magnetic structure are spaced such that the spaced apart relationship is greater at a central region of the diaphragm over at least one central magnet than the remote diaphragm regions over at least one remote magnet.

57. (Newly presented) A transducer as set forth in claim 48, wherein the configuration of the magnetic structure and the conductive paths is such that the conductive paths are located adjacent areas of maximized flux density in the plane of the diaphragm, said areas being located off a center point between adjacent magnet rows and between the center point and a magnet row, the magnets being spaced far enough apart that there are two such maxima between each row of magnets.

58. (Newly presented ) A transducer as set forth in claim 48, further comprising at least one virtual pole.

59. (Newly presented) A transducer as set forth in claim 48, wherein the center row provides more magnetic field strength by one of : a)larger volume of magnetic material; and, b) magnetic material having a different energy product .

60. (Newly presented ) A transducer as set forth in claim 48, wherein structure defining inter-magnet spaces is configured so that the inter-magnet spaces have a flaring shape.

61. (Newly presented ) A transducer as set forth in claim 48, wherein at least one magnet row has a polarity orientation wherein the north-south magnetic axis is parallel to a plane of the diaphragm.

62. (Newly presented ) A transducer as set forth in claim 48, wherein the support structure further comprises a perforated area having a multiplicity of small closely spaced perforations providing more acoustic transparency in that area.

63. (Newly presented) A planar-magnetic transducer which includes:

a vibratable diaphragm and attached conducive area capable of interacting with a magnetic field to convert and audio signal to acoustic output from the diaphragm;

an arrangement of primary magnetic structure positioned proximate to one side of the diaphragm for providing a desired magnetic field; and

at least one (but fewer that the all magnets comprising the primary magnetic structure) secondary magnet forming a secondary magnetic structure positioned on an opposing side of the diaphragm in a position which enhances acoustic output of the diaphragm, said secondary magnet structure being directly adjacent less diaphragm surface area than said primary magnet structure, said transducer being configured so that the secondary support structure has a more open architecture and significantly more open space than the primary support structure, allowing passage of acoustic energy with significantly less interference from the secondary support structure than the primary support structure and wherein a plurality of elongated magnets of the primary magnetic structure are without corresponding magnets of opposing position in the secondary magnetic structure, the transducer thereby configured to have an essentially single-ended configuration over a portion of the

diaphragm;

and wherein the magnetic field strength is greater towards a central portion of an active area of the diaphragm between locations wherein the diaphragm is constrained from movement, and generally decreases moving away from a central portion outward toward edges of the active area in at least one dimension.

64. (Newly presented) A transducer as in claim 63, further comprising at least one virtual magnetic structure positioned adjacent the secondary magnet and operable to further enhance the audio output of the transducer.

65. (Newly presented ) A transducer as set forth in claim 63, wherein over portions of the active area away from the diaphragm the primary magnetic structure and the diaphragm are essentially operable as a single ended device, whereas over a central portion of the active area the device is operable as a double ended device.

66. (Newly presented) A transducer as set forth in claim 63, further comprising a primary support structure carrying said arrangement of primary magnetic structure, and a secondary support structure carrying the at least one secondary magnet, and wherein the secondary support structure has a substantially more open architecture than the primary support structure, and wherein the secondary support structure can be disposed toward a listener and the primary support structure can be disposed away from a listener.

67. (Newly presented ) A transducer as set forth in claim 63, further comprising at least one virtual pole.

68. (Newly presented) A transducer as set forth in claim 63, wherein the magnetic field strength is greater toward a central portion due to use of one of a) a different volume of magnetic material, b) a different strength magnetic material, and c) a virtual pole.

69. (Newly presented) A transducer as set forth in claim 63, wherein a distance between magnetic structure and the diaphragm is greater adjacent a central portion of the diaphragm than that away from the central portion of the diaphragm.

70. (Newly presented) A transducer as set forth in claim 63, comprising at least two diaphragms.

71. (Newly presented) A transducer as set forth in claim 63, wherein the transducer is configured so that a shape of an inter-magnet space is configured to improve response of the transducer.

72. (Newly presented) A transducer as set forth in claim 63, wherein a magnet of the primary magnetic structure is disposed so that it has a polarity orientation that is 90 degrees different from that of at least one secondary magnet.

73. (Newly presented) A planar-magnetic transducer which includes:

a vibratable diaphragm and attached conducive area capable of interacting with a magnetic field to convert and audio signal to acoustic output from the diaphragm;

an arrangement of primary magnetic structure positioned proximate to one side of the diaphragm for providing a desired magnetic field;

at least one (but fewer that the all magnets comprising the primary magnetic structure) secondary magnet positioned on an opposing side of the diaphragm in a position which enhances acoustic output of the diaphragm;

and wherein the magnetic field strength is greater towards a central portion of an active area of the diaphragm between locations wherein the diaphragm is constrained from movement, and generally decreases moving away from a central portion outward toward edges of the active area in at least one dimension, wherein over portions of the active area away from the diaphragm the primary magnetic structure and the diaphragm are essentially operable as a single ended device, whereas over a central portion of the active area the device is operable as a double ended device.

74. (Newly presented) A planar-magnetic transducer which includes:

a vibratable diaphragm and attached conducive area capable of interacting with a magnetic field

to convert and audio signal to acoustic output from the diaphragm;

an arrangement of primary magnetic structure positioned proximate to one side of the diaphragm for providing a desired magnetic field;

at least one (but fewer that the all magnets comprising the primary magnetic structure) secondary magnet positioned on an opposing side of the diaphragm in a position which enhances acoustic output of the diaphragm;

and wherein the magnetic field strength is greater towards a central portion of an active area of the diaphragm between locations wherein the diaphragm is constrained from movement, and generally decreases moving away from a central portion outward toward edges of the active area in at least one dimension;

and wherein a distance between magnetic structure and the diaphragm is greater adjacent a central portion of the diaphragm than that away from the central portion of the diaphragm.